

WHAT IS CLAIMED IS:

1. 1. An apparatus for inspecting a resist pattern to detect defects by applying light to the resist pattern and visually checking light diffracted from the resist pattern, the apparatus comprising:
 - 4 a light source device for applying light to the resist pattern at an incident angle of not greater than 45 degrees with respect to a top surface of the resist pattern.
2. 2. The apparatus according to claim 1, wherein said light source device comprises:
 - 5 a light source; and means for narrowing a divergence angle of light from the light source to 10 to 60 degrees.
3. 3. The apparatus according to claim 2, wherein said means for narrowing the divergence angle includes an optical fiber.
1. 4. The apparatus according to claim 3, wherein said means for narrowing the divergence angle further includes a cylindrical lens for passing light from the optical fiber therethrough.
1. 5. The apparatus according to claim 4, further comprising:
 - 2 means for adjusting a direction of light applied from said light source device to a direction perpendicular to the direction in which the resist pattern extends.
 - 3

1 6. The apparatus according to claim 5, wherein light from said light source
2 device includes visible light.

1 7. The apparatus according to claim 6, wherein said visible light includes only light with a
2 wavelength of at least 480 nanometers.

1 8. The apparatus according to claim 6, wherein said visible light includes only light with a
2 wavelength of not greater than 580 nanometers.

1 9. The apparatus according to claim 6, wherein said visible light includes light of different
2 colors.

10. The apparatus according to claim 2, wherein said light source is a halogen lamp.

1 11. A method of inspecting a resist pattern to detect defects by applying light to the resist
2 pattern and visually checking light diffracted from the resist pattern, the method comprising the
3 steps of:

4 applying light from a light source to the resist pattern at an incident angle of not greater
5 than 45 degrees with respect to a top surface of the resist pattern; and

6 detecting the presence or absence of defects of the resist pattern by visually checking the
7 diffracted light traveling back to the side of the light source from the resist pattern.

1 12. The method according to claim 11, wherein said step of applying light comprises a step of
2 narrowing a divergence angle of light from the light source to 10 to 60 degrees.

1 13. The method according to claim 12, wherein said step of narrowing the divergence angle
2 comprises passing the light from the light source through an optical fiber.

1 14. The method according to claim 13, wherein said step of narrowing the divergence angle
2 comprises passing the light from the light source through a cylindrical lens.

1 15. The method according to claim 11, wherein said step of applying light comprises
2 removing light with a wavelength of less than 480 nanometers.

1 16. The method according to claims 11, wherein said step of applying light comprises
2 removing light with a wavelength of greater than 580 nanometers.

1 17. The method according to claim 11, wherein said step of applying light comprises
2 applying light of different wavelengths.

1 18. The method according to claim 11, wherein said step of applying light comprises
2 applying light from substantially the same height as the top surface of the resist pattern.

1 19. The method according to claim 11, wherein said step of applying light comprises
2 applying light in a direction perpendicular to a direction in which the resist pattern extends.

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